

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

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Claim 1 (Currently amended): A predistortion circuit for a Doherty power amplifier, the predistortion circuit comprising:

a Doherty power amplifier having a carrier amplifier and a peak amplifier, each amplifier having a respective bias level, the bias levels for said Doherty power amplifier selected to provide for predistortion of predetermined characteristics of an RF signal, the bias levels further selected to precompensate for distortion of said RF signal by an upstream serially connected power amplifier.

Claim 2 (Previously amended): The predistortion circuit as recited in claim 1, wherein one of said predetermined characteristics of the RF signal is gain as a function of input power level.

Claim 3 (Previously amended): The predistortion circuit as recited in claim 2, wherein the bias levels are selected to provide gain expansion as a function of input power.

Claim 4 (Original): The predistortion circuit as recited in claim 1, wherein one of said predetermined characteristics is phase.

Claim 5 (Previously amended): The predistortion circuit as recited in claim 4, wherein the bias levels are selected to provide phase compression as a function of input power level.

Claim 6 (Currently amended): A linear power amplifier circuit comprising:

a Doherty power amplifier having predetermined characteristics including input power range as a function of RF input power; and

Doherty an upstream predistortion circuit configured as a Doherty amplifier serially coupled to said power amplifier having characteristics selected to precompensate for said predetermined characteristics of said power amplifier as a function of input power.

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Claim 7 (Cancelled)

Claim 8 (Previously amended): The linear power amplifier circuit as recited in claim 6, wherein said power amplifier is configured as a Doherty amplifier having a predetermined gain compression characteristic as a function of input power.

Claim 9 (Previously amended): The linear power amplifier circuit as recited in claim 6, wherein said upstream predistortion circuit is configured to have a gain expansion characteristic such that the output gain of the circuit is relatively linear over the input power range of the power amplifier.

Claim 10 (Previously amended): The linear power amplifier circuit as recited in claim 6, wherein the power amplifier is configured as a Doherty amplifier having a predetermined phase compression characteristic as a function of input power.

Claim 11 (Previously Amended): The linear power amplifier circuit as recited in claim 10, wherein said upstream predistortion circuit is configured to have a phase expansion characteristic such that the output gain of the circuit is relatively linear over the input range of the power amplifier.

Claim 12 (Currently Amended): A linear power amplifier circuit comprising:
a Doherty power amplifier having predetermined characteristics including an input power range as a function of RF input power;
an upstream predistortion circuit configured as a Doherty power amplifier for precompensating said predetermined characteristics of said Doherty power amplifier; and
means a circuit for electronically tuning said upstream predistortion circuit so that a predetermined characteristic of the linear power amplifier circuit is linear over the input power range of the Doherty power amplifier.

Claim 13 (Original): The linear power amplifier circuit as recited in claim 12, wherein said predistortion circuit is configured as a Doherty amplifier.

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Claim 14 (Previously amended): The linear power amplifier circuit as recited in claim 12, wherein said predetermined characteristic is the output gain of the linear power amplifier circuit wherein said tuning means enables said output gain to be adjusted so that the output gain is relatively linear over the input range of the power amplifier.

Claim 15 (Previously amended): The linear power amplifier circuit as recited in claim 12, wherein power amplifier is configured as a Doherty amplifier having a predetermined phase compression characteristic as a function of input power.

Claim 16 (Previously amended): The linear power amplifier circuit as recited in claim 15, wherein said tuning means includes means for electronically tuning the predistortion circuit such that the output phase characteristic of the linear power amplifier circuit is relatively linear over the input range of the power amplifier.